Upgrading the Switch Hardware

Migration of Nodes From a First Generation Switch to a Second Generation Switch

You have first generation Cisco Nexus 9000 series switches that may or may not be comprising a virtual port channel (vPC). You are migrating to second generation Cisco Nexus 9000 series switches using the same cables.

First generation Cisco Nexus 9000 series switches include those switches that do not contain -EX, -FX, or -GX in the product ID.

Second generation Cisco Nexus 9000 series switches include those switches that have the -EX, -FX, -GX, or later suffix in the product ID.

To migrate the first generation switches to second generation switches, you must perform the steps in this procedure.

To determine which transceivers, adapters, and cables support this switch, see the Cisco Transceiver Modules Compatibility Information document.

To see the transceiver specifications and installation information, see Transceiver Module Installation Guides.

Before you begin

- Move any Cisco Application Policy Infrastructure Controllers (APICs) that are connected to the first generation switches that you are migrating to any other switches in the fabric and wait for the Cisco APIC cluster to become "Fully Fit."
- The following migration paths are supported:

  1. Migrating from first generation Cisco Application Centric Infrastructure (ACI) switches to second generation Cisco ACI switches that are running the same software release.
  2. Migrating from first generation Cisco ACI switches to second generation Cisco ACI switches that are running different software releases.

     The second migration path is required where the existing switches are not supported on the new release that is required for the new switches. For example, if you want to migrate from the first generation Cisco ACI switches, such as Cisco Nexus 9300 (with the -E suffix or without any suffixes

in the product ID) that are no longer supported starting on Cisco ACI switch 15.0(1) or later releases, to some of the new switches that are supported only from 15.0(1) or later.

When the first generation switches are comprising a vPC, complete the following mandatory prerequisite steps before you proceed with the second migration path:

a. Due to potential traffic loss, it is recommended that that you perform the vPC migration during a maintenance window.

b. Before you perform this procedure, the Auto Firmware Update policy must be disabled.

c. Upgrade the Cisco APIC cluster to the 4.2(7v) release if the cluster is running an older release. Also upgrade the first generation switches to the 14.2(7v) release. Wait for the fabric to converge.

d. Upgrade the Cisco APIC cluster to 5.2(7f) release and wait for the cluster to become "Fully Fit."

e. Ensure that the new second generation switches are preloaded and running the equivalent release as the Cisco APICs, that is 15.2(7f) release. Other than source and target version software releases 4.2(7v)/14.2(7v) and 5.2(7f)/15.2(7f), no other software releases are supported for this migration procedure.

Note

- The number of ports and port types of the second generation switches must match the first generation switch that you are replacing. If the number does not match, then you must change the configuration to accommodate the new ports or port types. This is also applicable if you migrate the hardware while retaining the same software version.
- To migrate first generation non-vPC leaf switches or first generation spine switches to second generation switches, follow Step 1, on page 2 through Step 6, on page 3 in the procedure outlined below. vPC-related information is not applicable for this migration.

  If you must migrate a first generation non-vPC leaf switch or a first generation spine switch to a second generation switch, the requirement of the source and target software release 4.2(7v)/14.2(7v) and 5.2(7f)/15.2(7f) is not required. Ensure that the Cisco ACI fabric is running the required software release that supports the second generation switch PID.

Procedure

Step 1 From the Cisco APIC GUI, perform the **Remove From Controller** operation for the operational secondary vPC switch node.

The Cisco APIC clean reboots the switch. Wait for about 10 minutes for this operation to finish. This action prompts all traffic to use the other first generation switch for data traffic.

Note There will be a loss of traffic for a few seconds for the operational secondary vPC when you perform the **Remove From Controller** operation.

Step 2 Disconnect the cabling from the first generation switch that you just removed.

Step 3 Uninstall the first generation switch by reversing the order of the steps in the "Installing the Switch Chassis" section of the switch-specific *Hardware Installation Guide*.

Step 4 Install the second generation switch by following the steps in the "Installing the Switch Chassis" section of the switch-specific *Hardware Installation Guide*.

Step 5 Connect the loose cabling that you removed from the first generation switch to the same ports on the second generation switch.

Step 6 Register the new second generation switch with the Cisco APIC.

Register the new node with the same node name and node ID. This switch becomes part of the fabric. The Cisco APIC pushes the policies to the new switch and keeps down the vPC legs because there is a mismatch of the generation of switches. At this point, the vPC primary continues to send the data traffic.

Step 7 Before you proceed to Step 8, on page 3, wait for 10 to 15 minutes for the new switch to download the configurations.

Step 8 From the Cisco APIC GUI, perform the **Remove From Controller** operation for the vPC primary. The Cisco APIC clean reboots the switch.

Wait for about 10 minutes for this operation to finish. The vPC leg on the second generation switch, which the Cisco APIC kept down earlier, comes up. This action prompts all traffic to move to the new second generation switch. The vPC ports on the new second generation switch can take a few minutes to come up, during which time there will be traffic drops. The duration of traffic drops varies by the scale and flows in the fabric.

Step 9 Disconnect the cabling from the first generation switch.

Step 10 Uninstall the first generation switch as you did in Step 3, on page 2.

Step 11 Install the second generation switch as you did in Step 4, on page 3.

Step 12 Connect the loose cabling as you did in Step 5, on page 3.

Step 13 Register the new second generation switch with the Cisco APIC.

Register the new node with the same node name and node ID. This switch becomes part of the fabric. The Cisco APIC pushes policies to the new switch and the vPC legs comes up and starts passing traffic.